



CALCULATION OF THE AVERAGE ANNUAL EFFECTIVE INTEREST RATE AND THE AGRICULTURAL LAND CAPITALIZATION RATE

The procedure for determining the capitalization rate that is to be used for qualified agricultural land valuation is prescribed in A.R.S. § 42-13101. That rate is specified as being "...one and one-half percentage points higher than the average long-term annual effective interest rate for all new federal land bank loans for the five year period prior to the year for which the valuation is being determined." Farm Credit Services Southwest provides the required interest rate information to the Department of Revenue.

Average Annual Effective Interest Rate Calculation. The interest rate that is charged on these agricultural loans varies with each individual loan. Farm Credit Services Southwest may impose certain requirements and surcharges on some borrowers which are considered in determining the effective interest rate that is to be used in the capitalization rate for qualified agricultural land. These currently include a requirement that the borrower must own enough stock in Farm Credit Services Southwest to equal four percent of the loan amount requested. This stock purchase is financed as a portion of a gross loan. However, interest is not presently being charged on this stock (as of May 1, 1996). In the past, a surcharge based on loan amount (an origination fee) was also applied. That practice was discontinued effective July 1, 1994.

The formula used to calculate the effective interest rate for a new loan is as follows:

$$\frac{(\text{Loan Amount} \times \text{Interest}) + (\text{Stock Cost} \times \text{Interest}) + (\text{Surcharge} \times \text{Interest})}{(\text{Loan Amount} + \text{Stock Cost} + \text{Surcharge}) - (\text{Stock Cost} \times \text{Interest}) - \text{Surcharge}} = \text{Effective Annual Rate}$$

The above formula is designed to accommodate changes in policy by Farm Credit Services Southwest, such as in periods during which a surcharge may or may not be charged, or in periods in which interest may or may not be charged on the amount of the stock purchased. Farm Credit Services Southwest provides the Department an annual report listing all loans originated during a twelve month period ending June 31.



The formula is then applied to calculate the effective interest rate for each loan originated by Farm Credit Services Southwest within that twelve-month period. Averaging these individual effective interest rates then provides the **average annual effective interest rate** for all loans originated.

Agricultural Capitalization Rate Calculation. After obtaining the average annual effective interest rate for the five-year period prior to the year for which the valuation is being determined, the capitalization rate is computed as in the following example:

<u>Year:</u>	<u>Effective Interest Rate:</u>
One	8.62
Two	8.20
Three	9.75
Four	8.33
Five	<u>8.09</u>
Five-year average =	8.60
<u>plus 1.50 percent</u>	<u>+ 1.50</u>
New Capitalization Rate =	10.10%